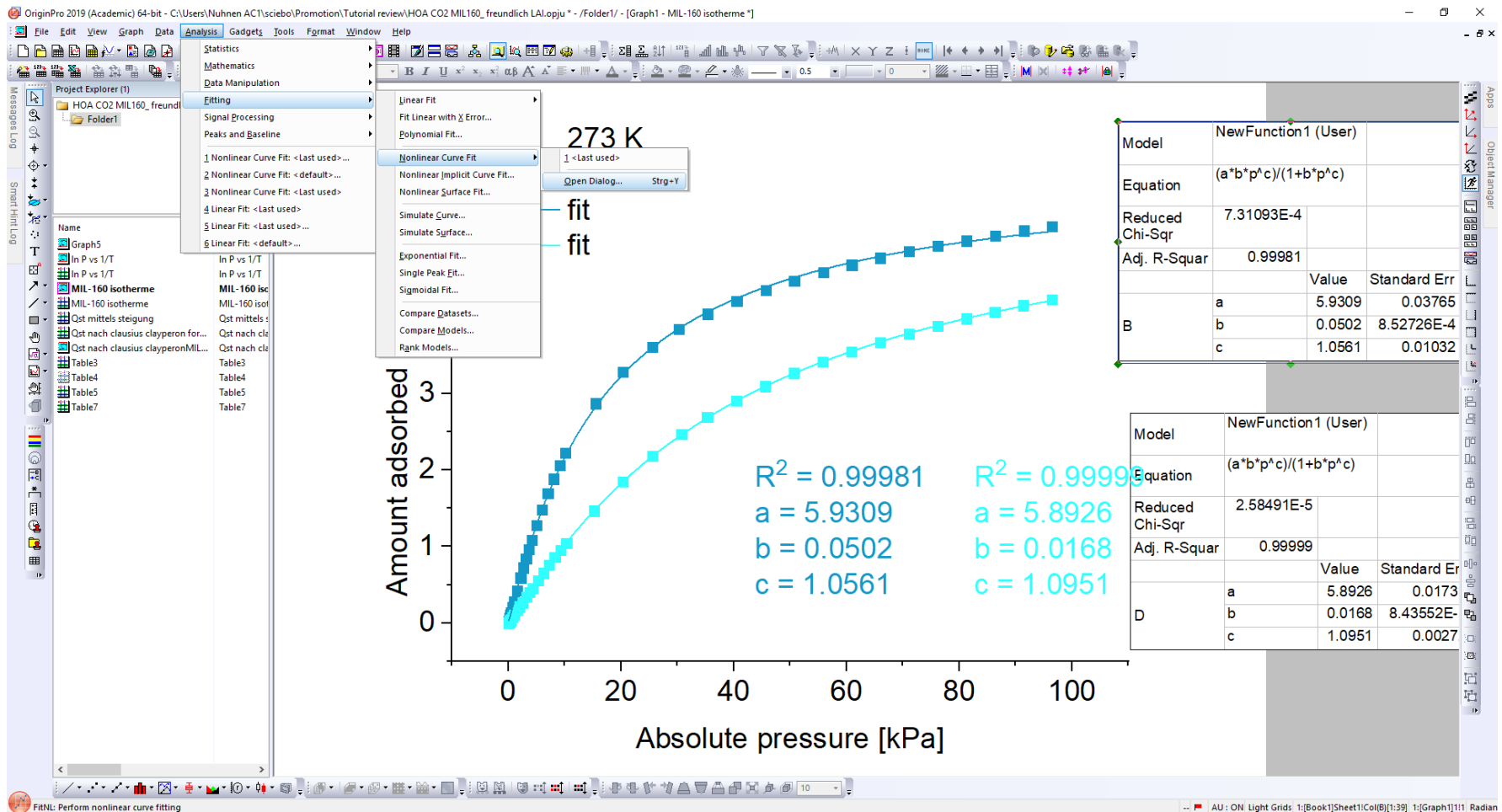


Freundlich-Langmuir fitting



The screenshot shows the OriginPro 2019 interface. The main window displays a graph with 'Absolute pressure [kPa]' on the x-axis (0 to 100) and a y-axis labeled '273 K'. A 'Fitting Function Builder - Variables and Parameters - Freundlichlangmuir' dialog box is open, showing the following settings:

- Independent Variables: p
- Dependent Variables: n
- Parameters: a,b,c
- Derived Parameters: (empty)
- Constants: (empty)
- Peak Function:

Two summary tables are shown on the right side of the image:

Model C		Value		Standard Err	
Model	NewFunction1 (User)				
Equation	$(a*b*p^c)/(1+b*p^c)$				
Reduced Chi-Sqr	7.31093E-4				
Adj. R-Sqvar	0.99981				
B	a	5.9309	0.03765		
	b	0.0502	8.52726E-4		
	c	1.0561	0.01032		

Model D		Value		Standard Err	
Model	NewFunction1 (User)				
Equation	$(a*b*p^c)/(1+b*p^c)$				
Reduced Chi-Sqr	2.58491E-5				
Adj. R-Sqvar	0.99999				
D	a	5.8926	0.0173		
	b	0.0168	8.43552E-5		
	c	1.0951	0.0027		

The screenshot shows the OriginPro 2019 interface. A graph at the bottom displays 'Absolute pressure [kPa]' on the x-axis, ranging from 0 to 100. A 'Fitting Function Builder' dialog box is open, showing the following details:

- Parameters:**

Param	Unit	Meaning	Fixed	Initial Value	Significant Digits
a	?		<input type="checkbox"/>	1	System
b	?		<input type="checkbox"/>	1	System
c	?		<input type="checkbox"/>	1	System
- Function Body:** $n = \frac{a \cdot b \cdot p^c}{1 + b \cdot p^c}$
- Quick Check:**
 - P = 1
 - n = 0.5

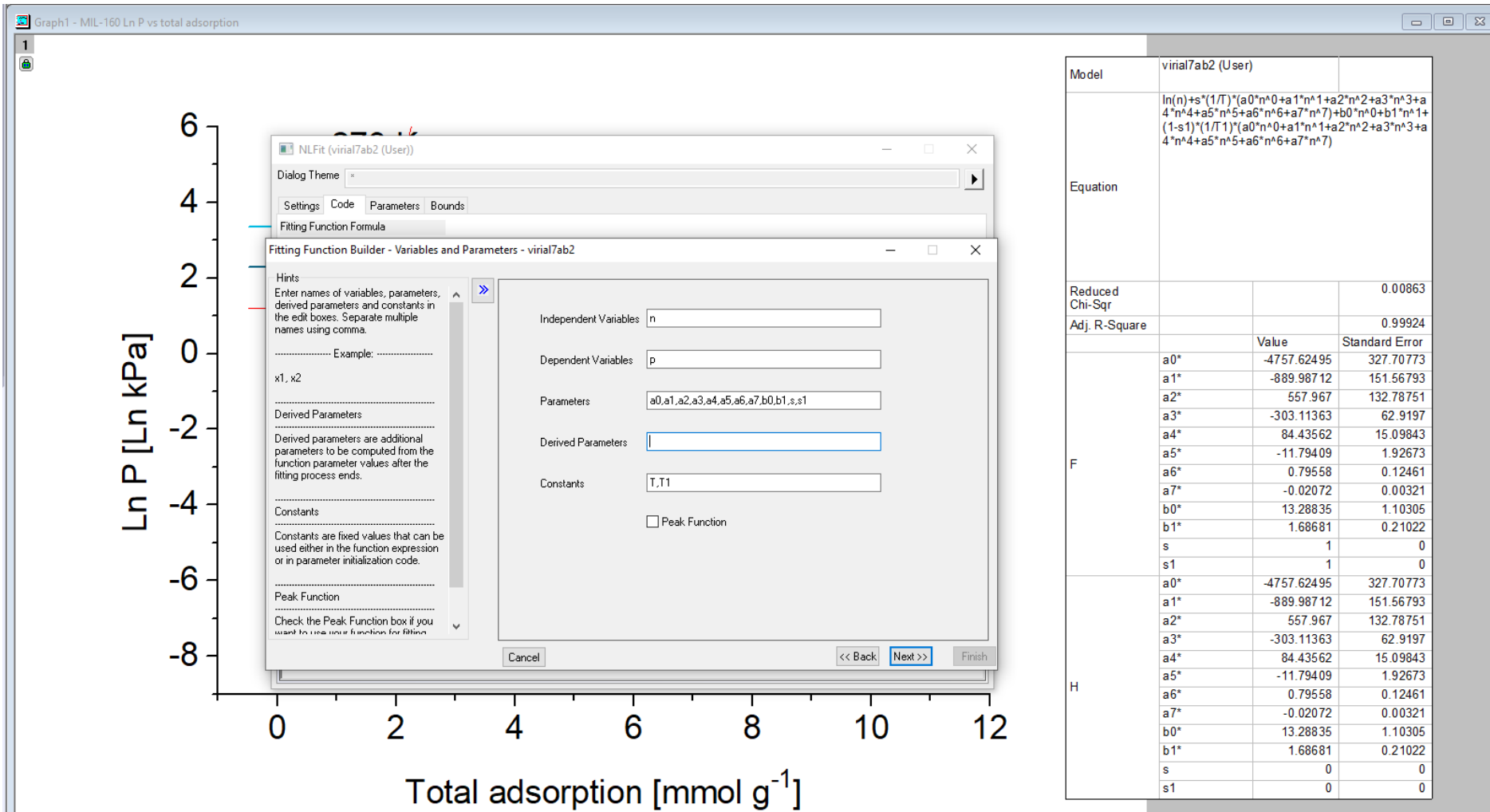
Two summary tables are overlaid on the right side of the image:

Model	NewFunction1 (User)	Value	Standard Err
Equation	$(a \cdot b \cdot p^c) / (1 + b \cdot p^c)$		
Reduced Chi-Sqr	7.31093E-4		
Adj. R-Squar	0.99981		
B	a	5.9309	0.03765
	b	0.0502	8.52726E-4
	c	1.0561	0.01032

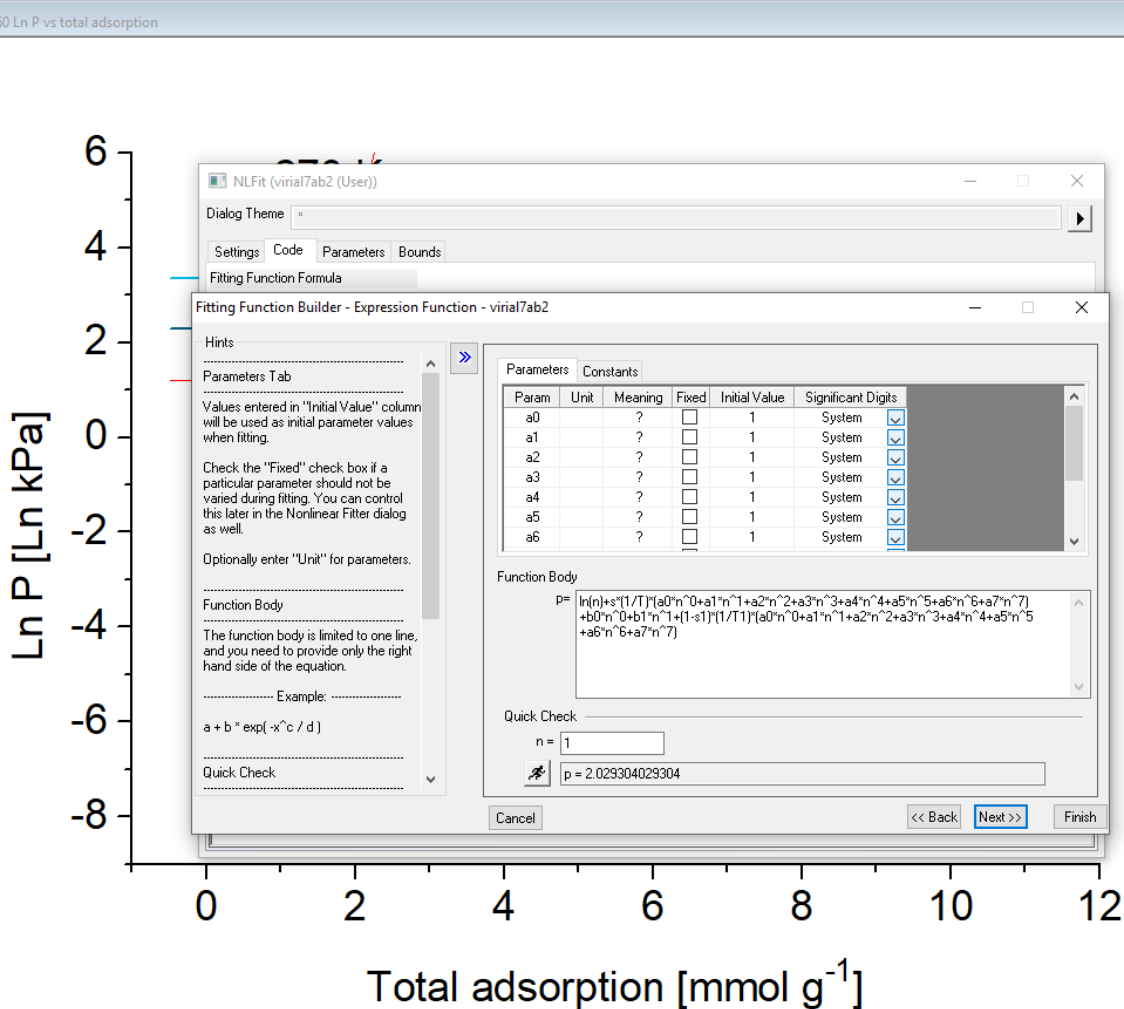
Model	NewFunction1 (User)	Value	Standard Err
Equation	$(a \cdot b \cdot p^c) / (1 + b \cdot p^c)$		
Reduced Chi-Sqr	2.58491E-5		
Adj. R-Squar	0.99999		
D	a	5.8926	0.0173
	b	0.0168	8.43552E-
	c	1.0951	0.0027

Virial analysis

Origin

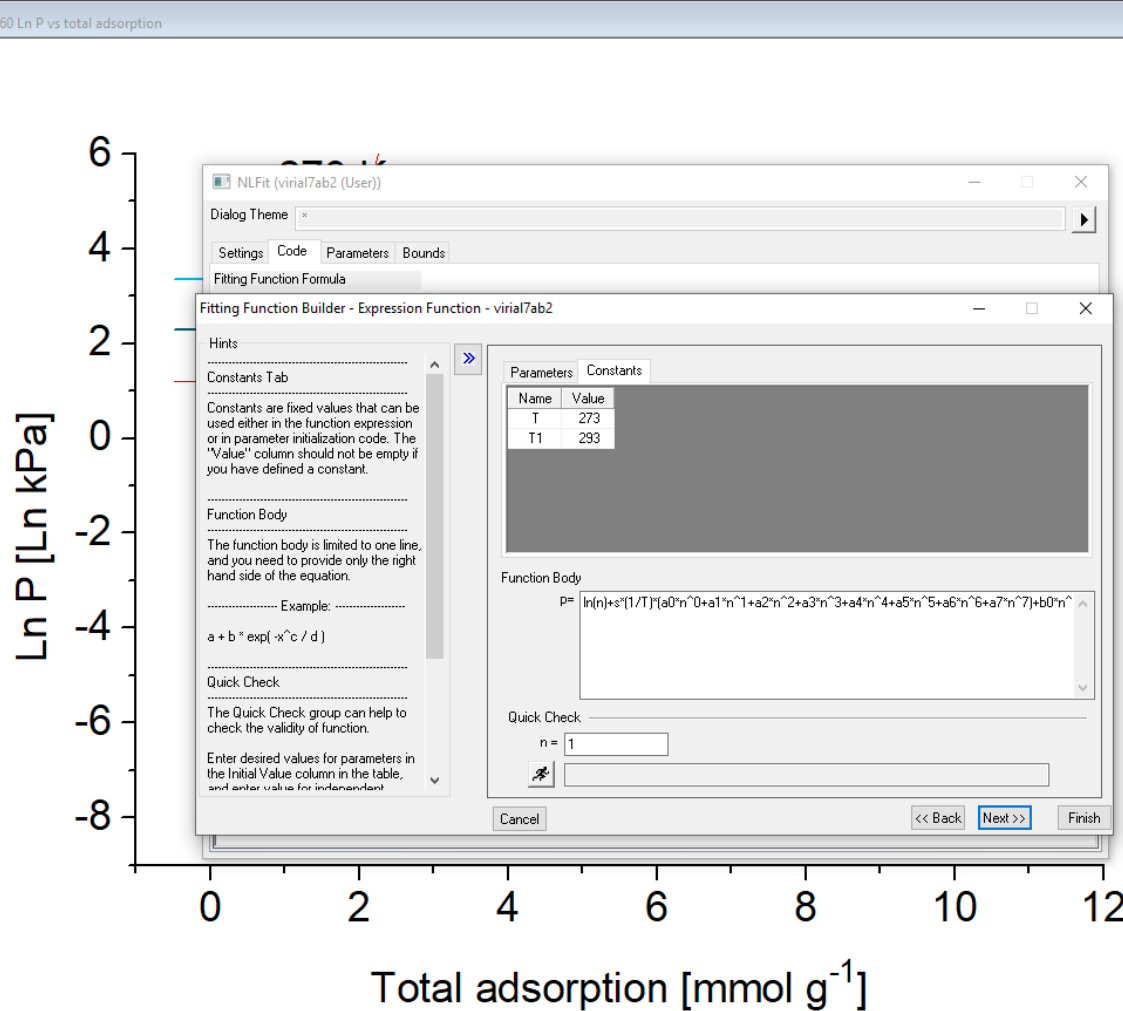


Origin



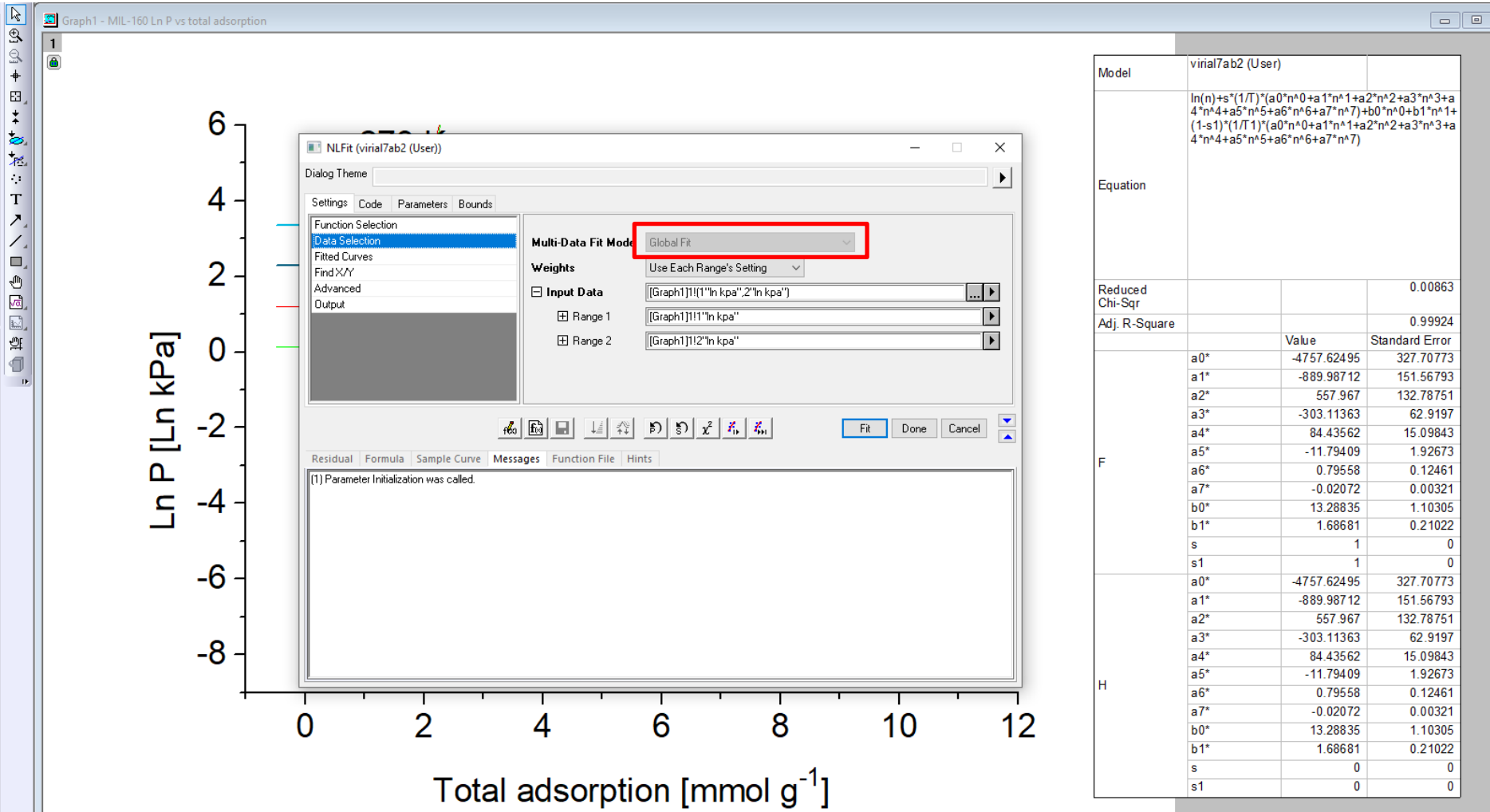
Model	virial7ab2 (User)		
Equation	$\ln(n) + s \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7) + b_0 \cdot n^0 + b_1 \cdot n^1 + (1-s) \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7)$		
Reduced Chi-Sqr		0.00863	
Adj. R-Square		0.99924	
F		Value	Standard Error
	a0*	-4757.62495	327.70773
	a1*	-889.98712	151.56793
	a2*	557.967	132.78751
	a3*	-303.11363	62.9197
	a4*	84.43562	15.09843
	a5*	-11.79409	1.92673
	a6*	0.79558	0.12461
	a7*	-0.02072	0.00321
	b0*	13.28835	1.10305
	b1*	1.68681	0.21022
	s	1	0
	s1	1	0
H	a0*	-4757.62495	327.70773
	a1*	-889.98712	151.56793
	a2*	557.967	132.78751
	a3*	-303.11363	62.9197
	a4*	84.43562	15.09843
	a5*	-11.79409	1.92673
	a6*	0.79558	0.12461
	a7*	-0.02072	0.00321
	b0*	13.28835	1.10305
	b1*	1.68681	0.21022
	s	0	0
	s1	0	0

Origin

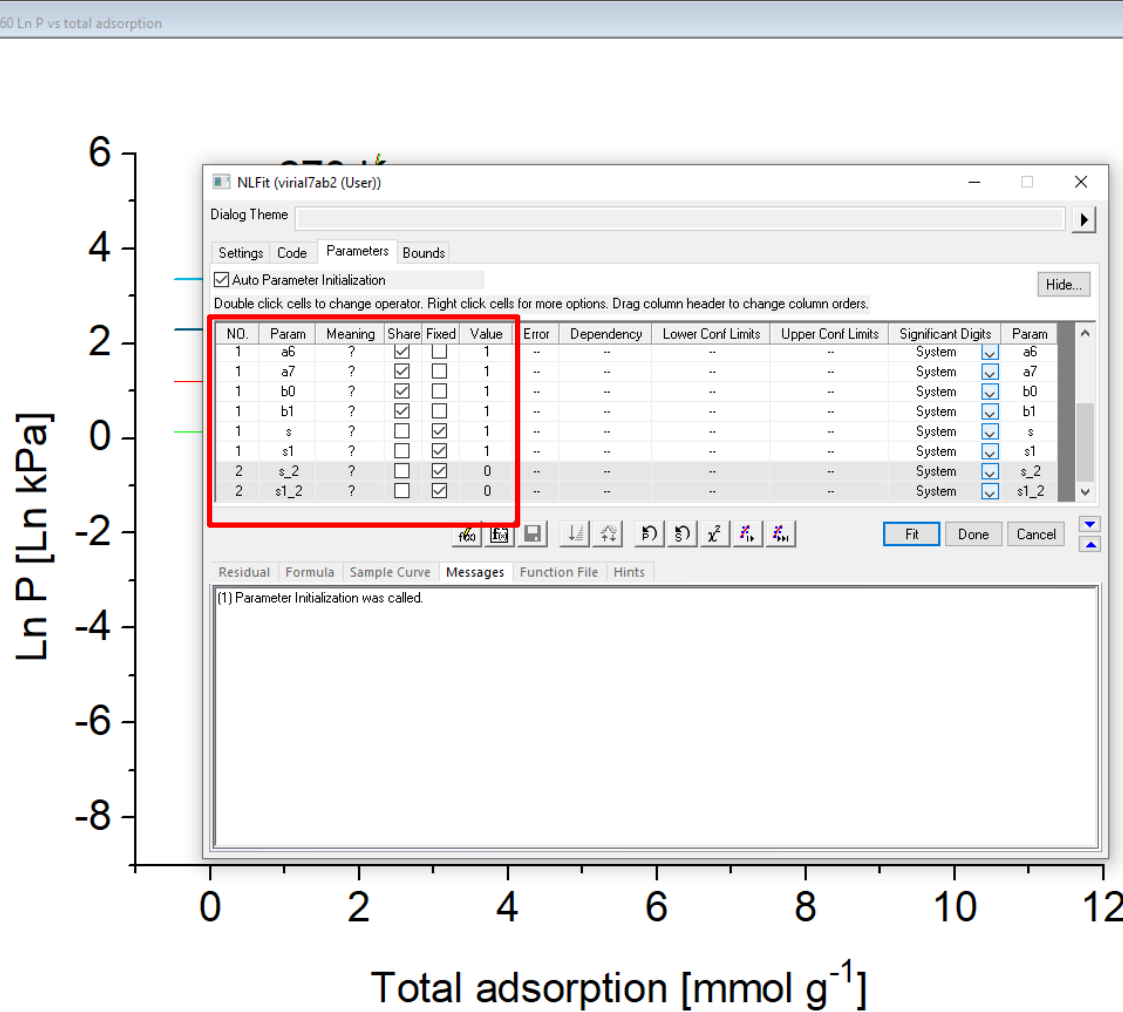


Model	virial7ab2 (User)		
Equation	$\ln(n) + s \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7) + b_0 \cdot n^0 + b_1 \cdot n^1 + (1-s) \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7)$		
Reduced Chi-Sqr		0.00863	
Adj. R-Square		0.99924	
F	Value	Standard Error	
	a0*	-4757.62495	327.70773
	a1*	-889.98712	151.56793
	a2*	557.967	132.78751
	a3*	-303.11363	62.9197
	a4*	84.43562	15.09843
	a5*	-11.79409	1.92673
	a6*	0.79558	0.12461
	a7*	-0.02072	0.00321
	b0*	13.28835	1.10305
	b1*	1.68681	0.21022
	s	1	0
	s1	1	0
	H	a0*	-4757.62495
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a7*		-0.02072	0.00321
b0*		13.28835	1.10305
b1*		1.68681	0.21022
s		0	0
s1		0	0

Origin



Origin



Model		virial7ab2 (User)	
Equation		$\ln(n) + s \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7) + b_0 \cdot n^0 + b_1 \cdot n^1 + (1-s) \cdot (1/T) \cdot (a_0 \cdot n^0 + a_1 \cdot n^1 + a_2 \cdot n^2 + a_3 \cdot n^3 + a_4 \cdot n^4 + a_5 \cdot n^5 + a_6 \cdot n^6 + a_7 \cdot n^7)$	
Reduced Chi-Sqr			0.00863
Adj. R-Square			0.99924
		Value	Standard Error
F	a0*	-4757.62495	327.70773
	a1*	-889.98712	151.56793
	a2*	557.967	132.78751
	a3*	-303.11363	62.9197
	a4*	84.43562	15.09843
	a5*	-11.79409	1.92673
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	a7*	-0.02072	0.00321
	b0*	13.28835	1.10305
	b1*	1.68681	0.21022
	s	1	0
s1	1	0	
H	a0*	-4757.62495	327.70773
	a1*	-889.98712	151.56793
	a2*	557.967	132.78751
	a3*	-303.11363	62.9197
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	b0*	13.28835	1.10305
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	s	0	0
s1	0	0	